

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

TO: NATIONAL WEATHER SERVICE (W/OS31)  
HYDROMETEOROLOGICAL INFO CENTER  
1325 EAST-WEST HIGHWAY, RM 13468  
SILVER SPRING, MD 20910

SIGNATURE:  
Daniel K. Cobb, MIC  
Mark L. Walton, Service Hydrologist

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOM E-41).

An X inside this box indicates that no significant flooding occurred within this Hydrologic Service Area.

**Summary**

No significant flooding occurred during the month of March in our Hydrologic Service Area (HSA). A flood advisory for urban and small streams was issued for 13 counties.

**Flood Conditions**

A flood advisory for urban and small streams was issued on March 31<sup>st</sup>, for Clare, Gratiot, Isabella, Mecosta, Montcalm, Osceola, Kent, Ottawa, Lake, Mason, Muskegon, Newaygo, and Oceana counties. A line of thunderstorms moved through the advisory area and resulted in one to two inches of rainfall occurring over a twelve hour period. Only minor ponding of water on roads was reported during this advisory event.

**Flood Stage Report**

No rivers exceeded flood stage during the month of March.

**River Conditions**

River levels by the end of March were near to above normal for our HSA. The end of the month percentage of normal flow for selected rivers is listed below:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	104
Whitehall	White	100
Evart	Muskegon	96
Mt. Pleasant	Chippewa	110
Lansing	Grand	152
Grand Rapids	Grand	123
East Lansing	Red Cedar	175
Hastings	Thornapple	138
Battle Creek	Battle Creek	166
Comstock	Kalamazoo	142

## **General Hydrologic Information**

March of 2008 will most be remembered for being cooler, and for most of the month, drier than normal. A storm system the last two days of the month produced enough rainfall to bring most of the area up to around normal for the month.

March precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.47, 2.38, and 3.16 inches, respectively. Precipitation totals for the month at these three sites were 0.12 of an inch below normal at Grand Rapids, 0.05 of an inch above normal at Lansing, and 0.80 of an inch above normal at Muskegon, Michigan. For the year, precipitation totals were above normal at Grand Rapids, Lansing, and Muskegon, Michigan. Yearly precipitation totals were 4.23 inches above normal for Grand Rapids, 2.47 inches above normal for Lansing, and 6.20 inches above normal for Muskegon, Michigan. Snowfall totals for the month at Grand Rapids, Lansing, and Muskegon were 9.2 (+0.2), 7.0 (-1.7), and 8.5 (-2.6) inches, respectively. By the end of the month, all the snow had melted at Grand Rapids, Lansing, and Muskegon, Michigan.

Temperatures for the month of March were below normal at Grand Rapids, Lansing, and Muskegon, with average monthly departures of -1.8, -2.0 and -2.3 degrees Fahrenheit, respectively.

Frost depths were zero, and river ice coverage was gone with rivers wide open across the Hydrologic Service Area.

## **Hydrologic Products issued this month:**

- 3 Hydrologic Outlooks (ARBESFGRR) were issued
- 2 Flood Warnings (ARBFLWGRR) were issued (both crested below flood stage)
- 1 Flood Statement (ARBFLSGRR) was issued
- 47 Hydrologic Statements (ARBRVSGRR) were issued
- 31 Hydrologic Summary's (ARBRVAGRR) were issued